

FAS – Office of Global Analysis (OGA)
United States Department of Agriculture (USDA)
International Operational Agriculture Monitoring Program



December Monthly Report

December 23rd, 2008

1. Afghanistan grain production consists of a winter and spring season that is defined by an irrigated and rainfed cropland; wheat makes up approximately 80% of Afghanistan's grain production. Nearly 90% of irrigated and rainfed cropland is planted in the fall generally between mid-October and late-November with the exception of the Central and Eastern highlands which are planted a month earlier. Rainfed crop production is variable and is heavily influenced by agrometeorological conditions such as precipitation and temperature. Similarly, the irrigated crop depends on precipitation in the form of snowfall in the centrally located Hindu Kush Mountains. Therefore, the overall amount of snowpack, distribution and the timing of snowmelt during the spring months to feed the river networks are critical to the irrigated grains crop. Snow also provides the necessary soil moisture in rainfed areas.
2. Overall cumulative precipitation between October 1st and December 20th was better than normal, as well as the previous year, in portions of the West, North, Northeast, and East regions. The remainder of the country, particularly the central highlands remained, below normal (Figure 1). During the same period of time, temperatures were well above normal in the Eastern portion of the country, whereas temperatures in the West have remained near normal (Figure 2).
3. Precipitation for the northern rainfed crop remained close to normal to slightly above normal for most of October followed by a significant reduction in precipitation by mid-November (Figures 3 & 4). The Northwest and Northeast provinces received well above normal cumulative rainfall between October 1st and December 20th; these provinces make up approximately 43% of rainfed wheat area. However, the North provinces of Faryab, Jowzjan, Sar-e Pul, Balkh, and Samangan received well below normal rainfall during the sowing season; these provinces typically make up 52% of rainfed wheat area. Temperatures throughout the rainfed cropland were well above normal in the North and Northeast provinces, whereas the Northwest provinces have remained near normal.

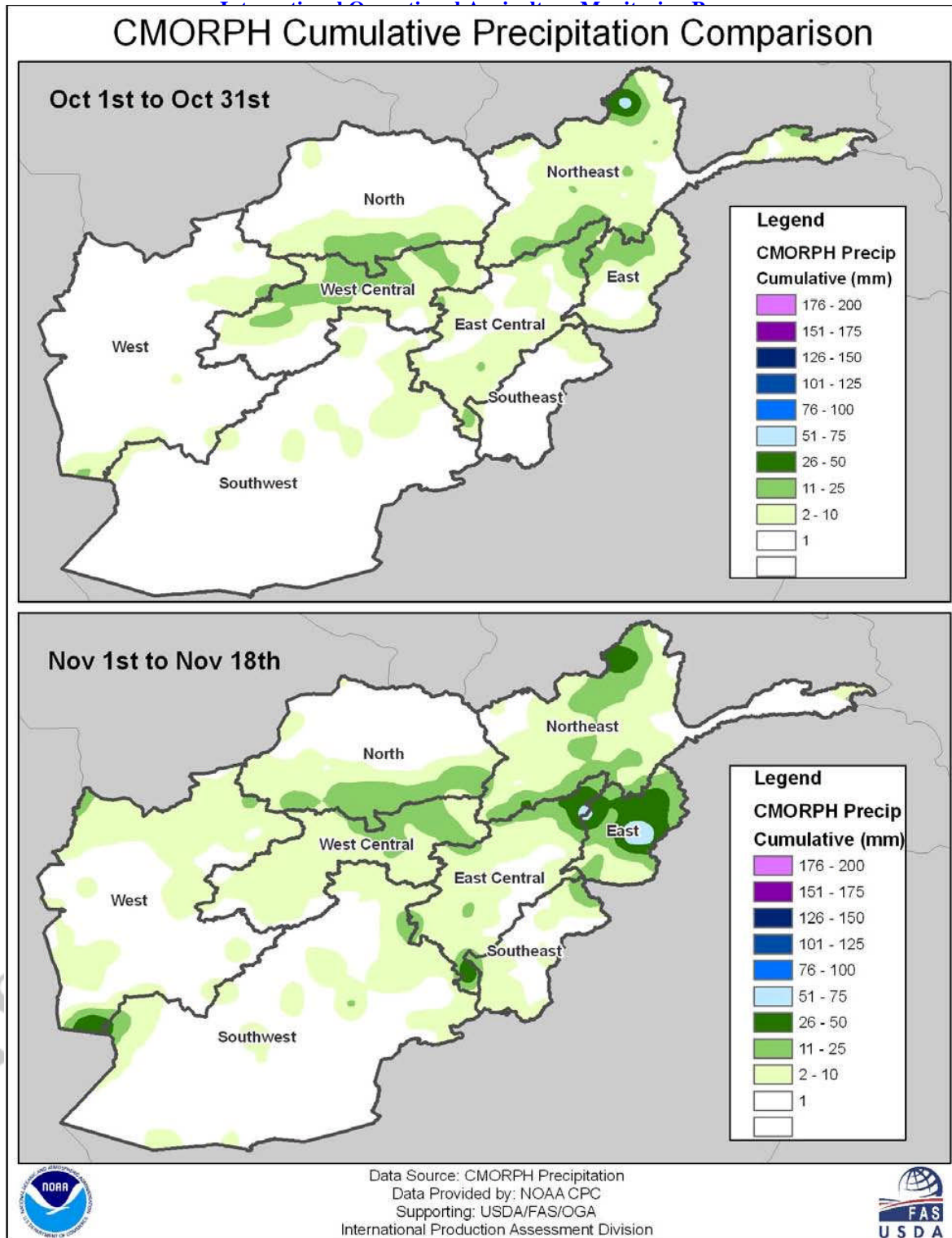


Figure 1: CMORPH cumulative precipitation data: Comparing October to November.

AFWA Temperature: Departure from Normal

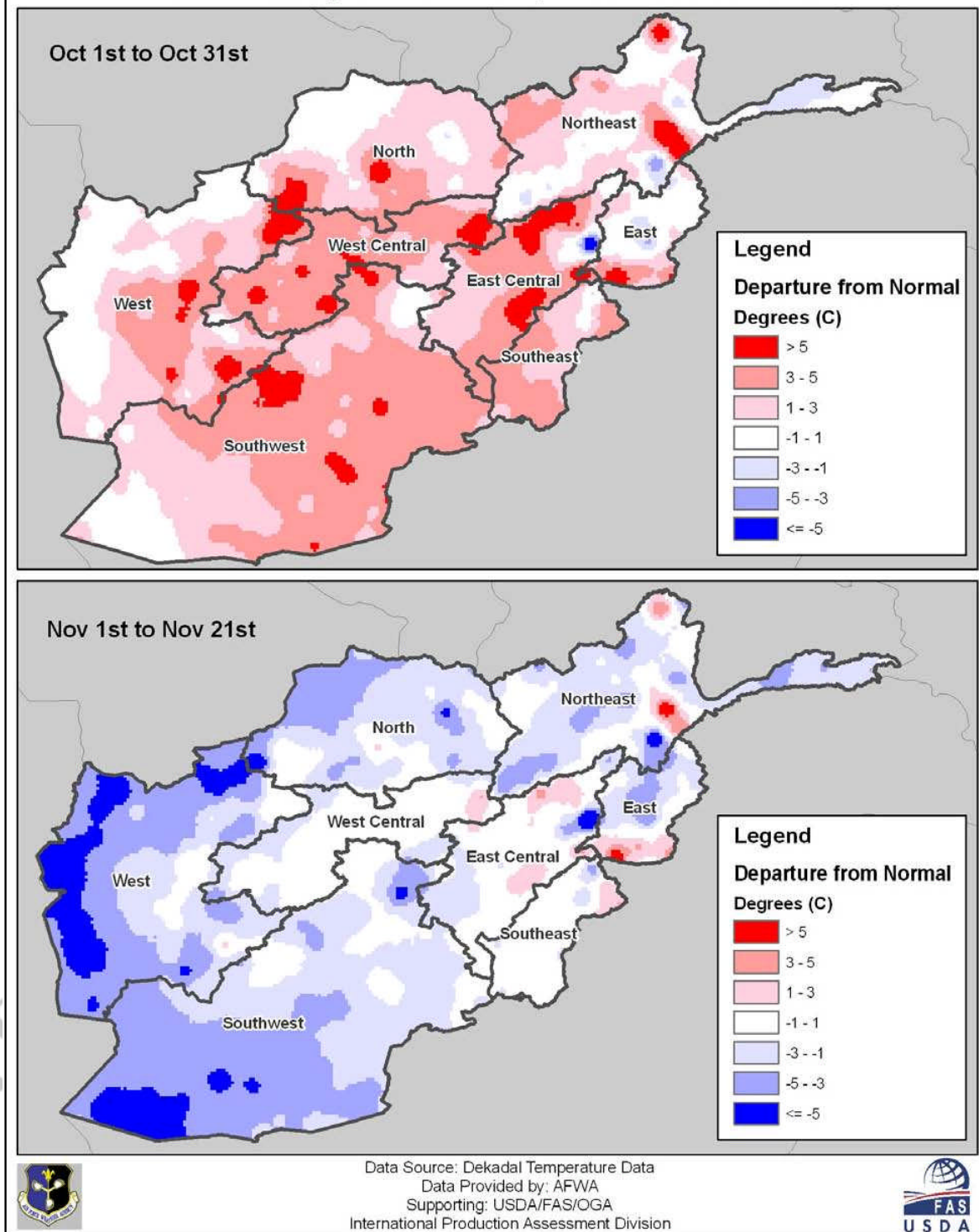


Figure 2: AFWA decadal temperature departure from normal: Comparing October to November.

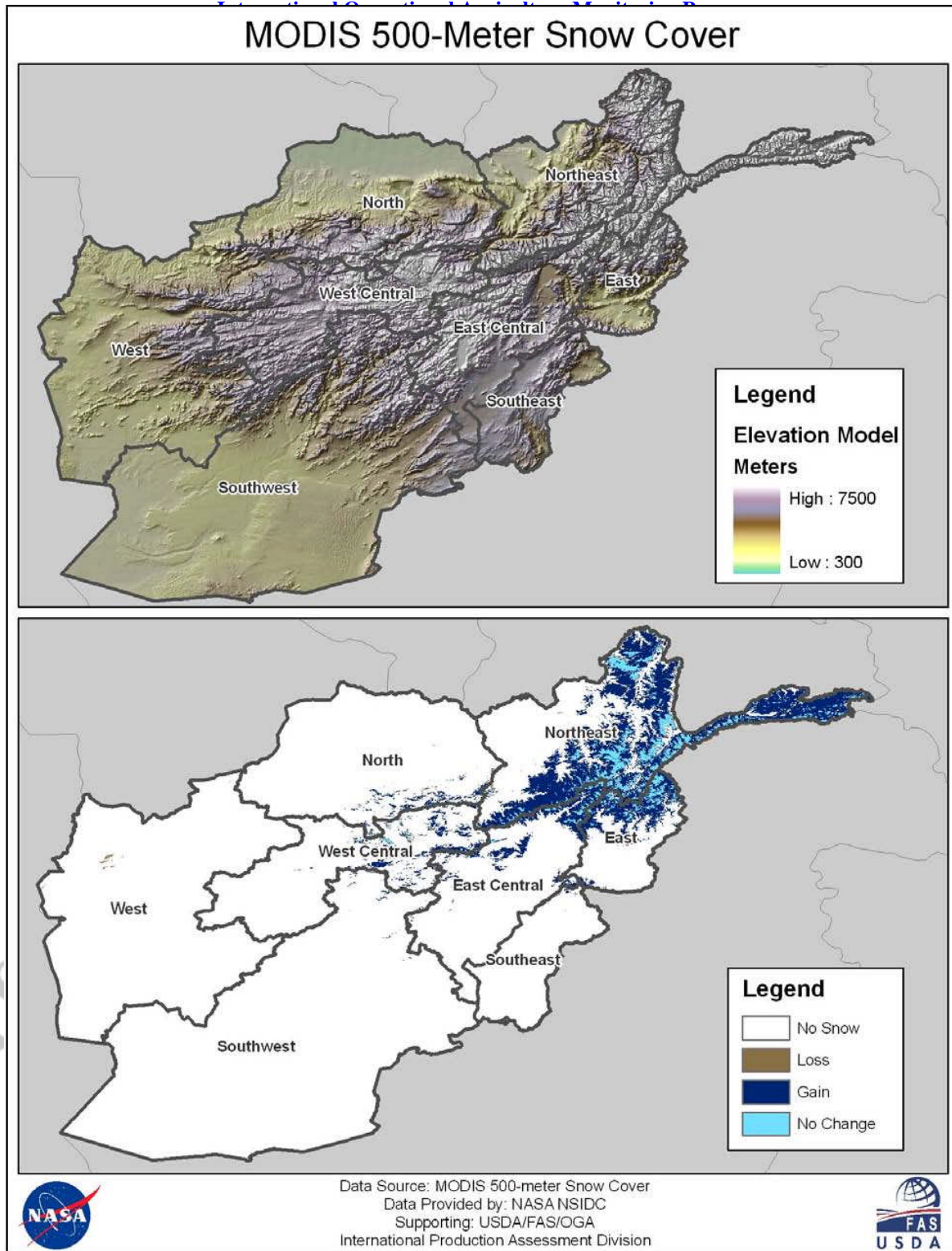


Figure 3: MODIS 500-meter snow cover product: Comparing November (Dekad 1) to November (Dekad 2).

AFWA Gridded Snow Depth

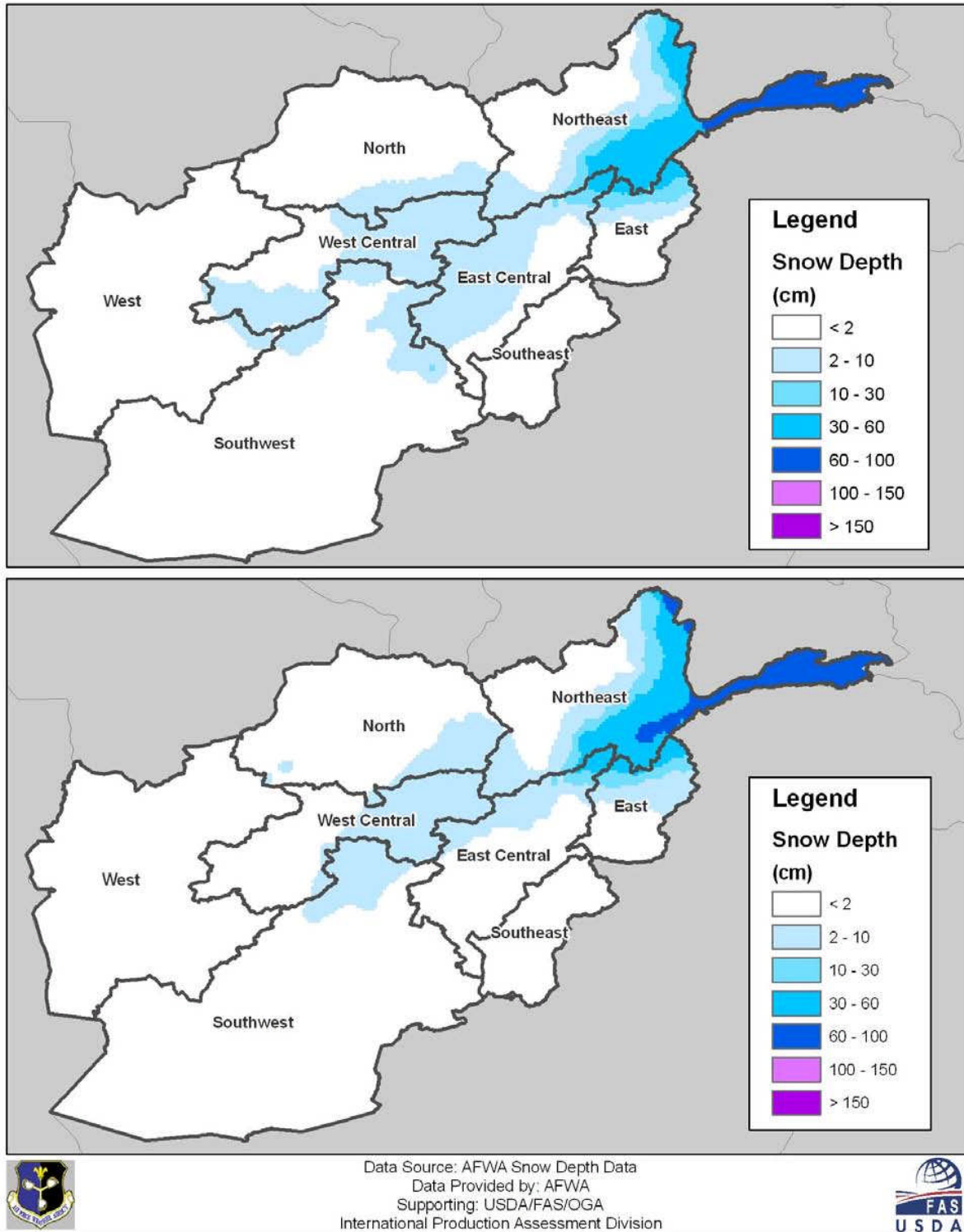
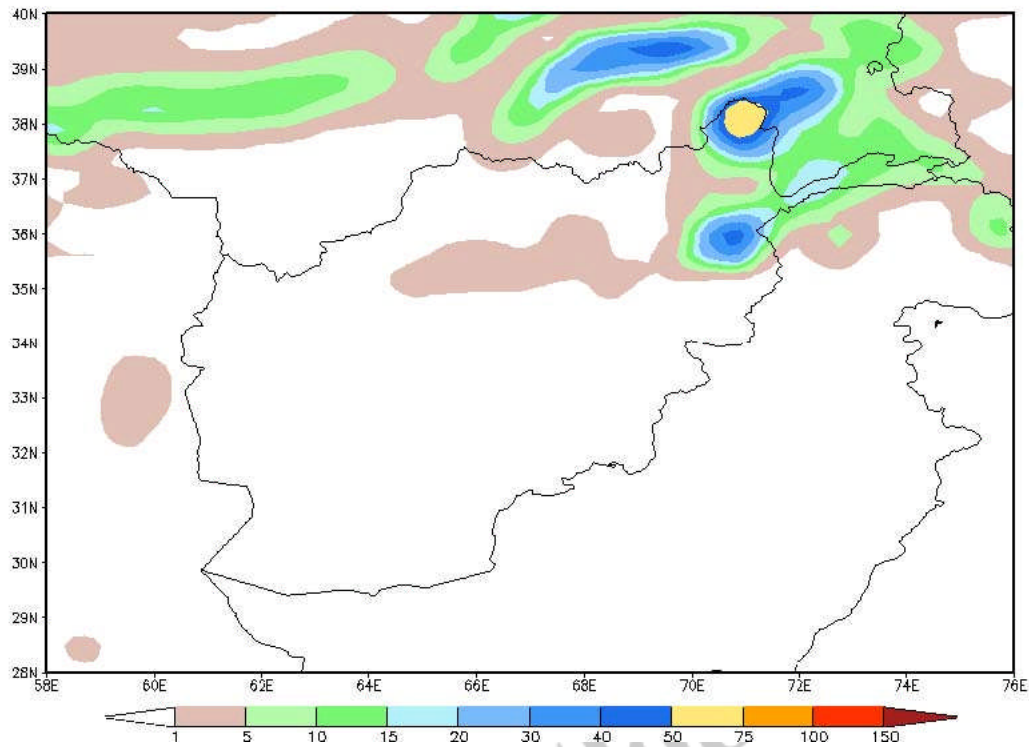


Figure 4: AFWA snow depth product: Comparing November (Dekad 1) to November (Dekad 2).

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NOAA GFS 37.5 km Week 1 Total Precipitation (mm)
Issued at Nov 21 2008 00Z for the period ending at Nov 28 2008 00Z



NOAA GFS 37.5 km Week 1 Snow Depth Change (cm)
Issued Nov 21 2008 00Z for the period ending at Nov 28 2008 00Z

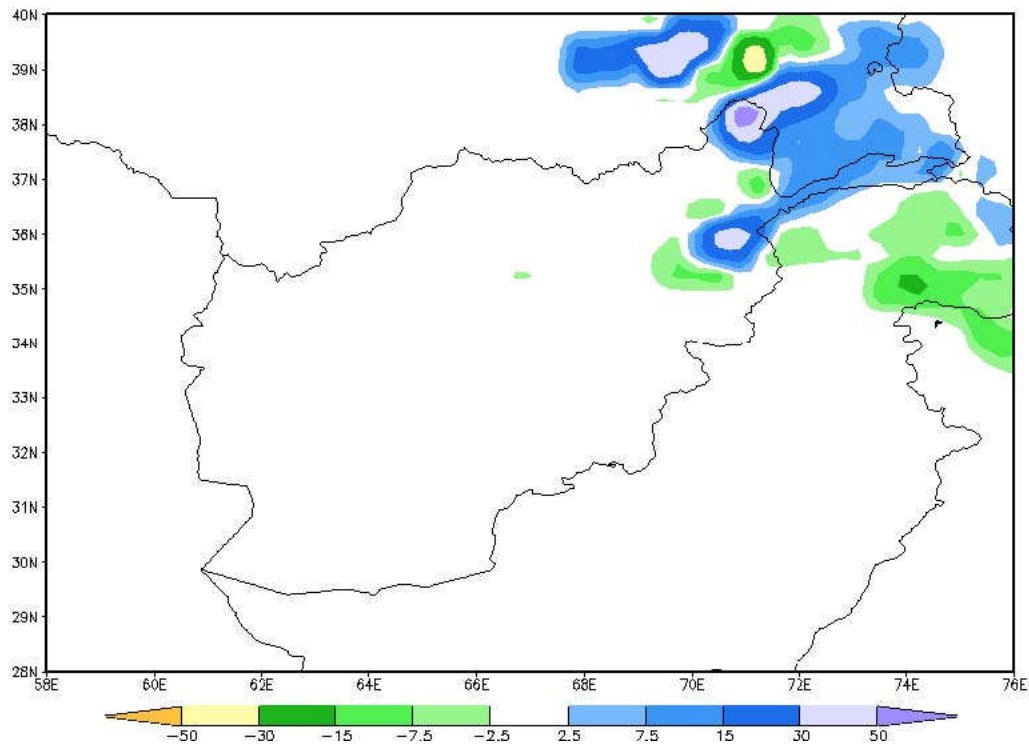


Figure 5: NOAA GFS 7-day cumulative precipitation and snow change outlook.

Regional Wheat Area Statistics: Irrigated vs Rainfed

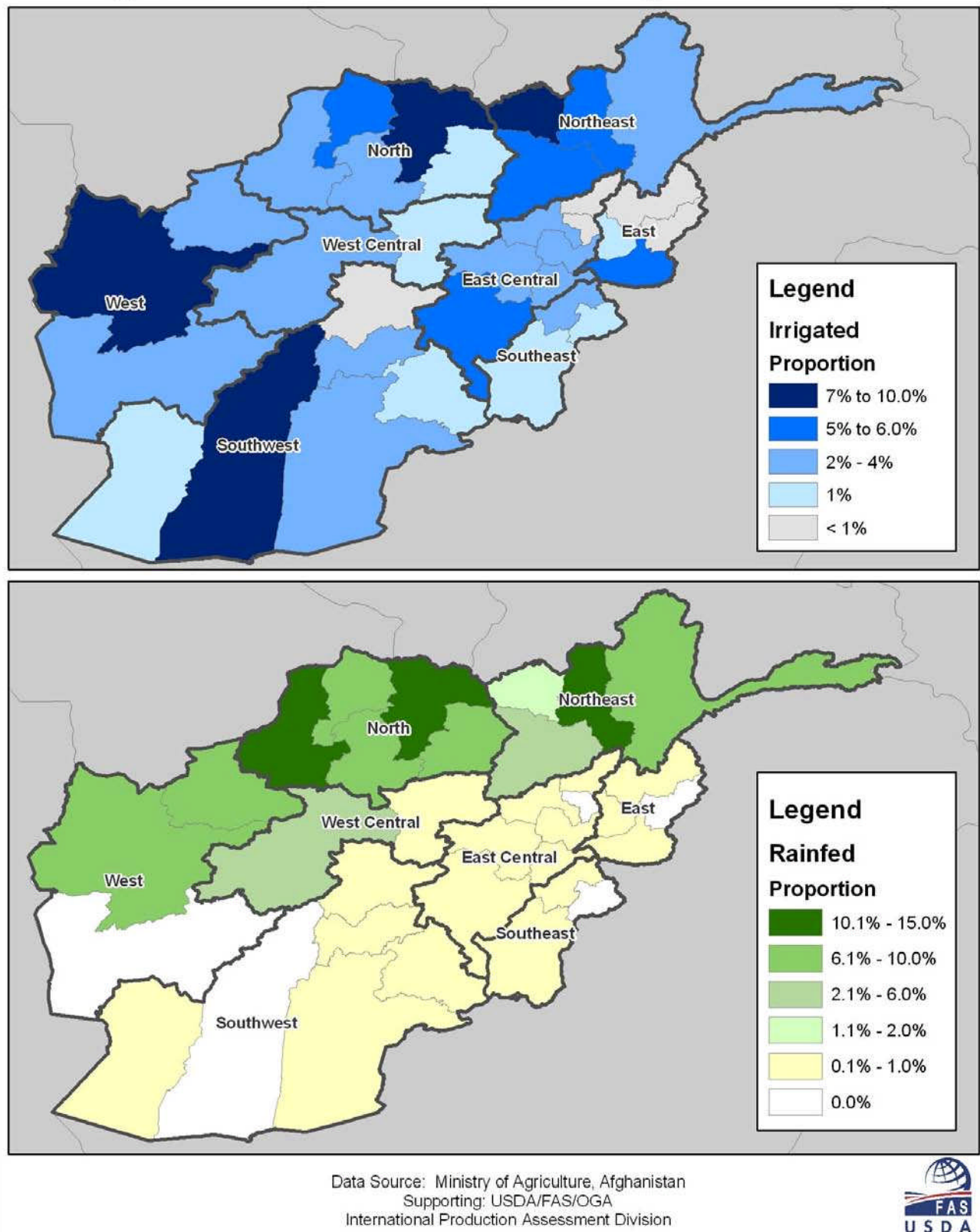


Figure 6: Regional area wheat statistics from 2005/06 to 2007/08.